

IN THE CLAIMS

Claims 1 through 19: **Cancelled**

20. (New) A building construction for protection from radiation, said construction comprising at least one building components having a layered sandwich configuration wherein at least one layer of gypsum antiradiation material is between opposite layers of concrete.

21. (New) The building construction of claim 20, wherein said gypsum antiradiation material comprises water bound thereto.

22. (New) The building construction of claim 21, wherein said gypsum antiradiation material comprises natural, unfired calcium sulfate dihydrate.

23. (New) The building construction of claim 20, wherein said gypsum antiradiation material comprises panels deposited in a space between said concrete layers.

24. (New) The building construction of claim 23, wherein said gypsum panels are free-standing in said space.

25. (New) The building construction of claim 23, wherein said gypsum panels are permanently set in said space.

26. (New) The building construction of claim 20, wherein said gypsum antiradiation material comprises granulated gypsum particles poured into a space between said concrete layers.

27. (New) The building construction of claim 26, wherein said gypsum particles have a particle size of about 40 mm or smaller.

28. (New) The building construction of claim 20, wherein said gypsum antiradiation material is compressed into a space between said concrete layers.

29. (New) The building construction of claim 20, further comprising at least one additive selected from the group of gibbsite, hydragilite, aluminum hydrate, and magnesium added to said gypsum antiradiation material.

30. (New) The building construction of claim 20, further comprising at least one construction component comprising an antiradiation material poured and compressed between a pit sheet wall and a concrete layer.

31. (New) The building construction of claim 20, wherein at least one of said concrete layers comprises a double-wall structure.

32. (New) The building construction of claim 31, wherein said double-wall structure is filled with poured concrete.

33. (New) The building construction of claim 32, wherein said poured concrete further comprises an antiradiation additive.

34. (New) The building construction of claim 20, wherein each of said concrete layers comprise a double-wall structure, said gypsum antiradiation material disposed between said double-wall structures.

35. (New) The building construction of claim 34, wherein each of said double-wall structures comprises wall segments connected together with tie rods extending between said wall segments.

36. (New) The building construction of claim 34, wherein each of said double-wall structures comprises prefabricated concrete panels connected together with lattice girders.

37. (New) The building construction of claim 36, wherein said lattice girders are formed of a corrosion resistant steel.

38. (New) The building construction of claim 20, further comprising a layer of antiradiation material beneath said building construction that has sufficient structural integrity for supporting said building construction.